

Science vs. Guesswork

How "Hit-or-Miss" Lubrication Gave Way to the Scientific Use of Oils.

Friction in an engine is the worst enemy of economy and full power.

The practical need for something to reduce friction brought about the first use of lubricants. Fish oils and animal fats were first used.

It was later found that petroleum would yield different types of lubricating oils of marked superiority.

Development in the manufacture of different grades and classes of lubricating oils came at a fortunate time. For mechanical arts developed rapidly.

Unless the lubricating problems were properly met, mechanical development would fail in its aim. Only the properly lubricated engine could yield the efficiency aimed at.

Manufacturers of Gargoyle Mobiloils were the first manufacturers of petroleum residual lubricants; and were the pioneers in the field of scientific lubrication and demonstration of power-saving by the use of proper lubricants.

Write for "Correct Lubrication" booklet containing complete discussion of your lubrication problems, lists of troubles with remedies, and complete Charts of Recommendations for Automobiles, Motorcycles, Tractors, and Motorboat Engines.

In taking up automobile lubrication they simply pursued their professional methods which were already well established in other fields of power-production and transmission.

The Chart of Automobile Recommendations shown in part at the right, represents the professional advice of a Board of Automotive Engineers, based on technical knowledge of gas engines and actual tests on the road.

In using the oil specified for your car you will use oil whose correctness was determined by very thorough and careful engineering analysis of your engine. The oil specified combines high quality with correct body.

It will give you:—

- Increased power—Noticeable particularly on the hills.
- Reduced Carbon deposit.
- Reduced Gasoline consumption.
- Reduced Oil consumption.
- Freedom from unnecessary repairs.



IMPERIAL OIL LIMITED

Manufacturers and Marketers of Polarine Motor Oils and Greases
Marketers of Gargoyle Mobiloils in Canada

BRANCHES THROUGHOUT CANADA

Correct Automobile Lubrication
In the Chart below, the letter opposite the car indicates the grade of Gargoyle Mobiloils that should be used. For example, A means Gargoyle Mobiloil "A," Arc means Gargoyle Mobiloil Arctic, etc. The recommendations cover all models of both pleasure and commercial vehicles unless otherwise noted.

AUTOMOBILES	Superior	Standard	Normal	Light	Medium	Heavy	Extra Heavy
Alco	A	Arc	Arc	Arc	Arc	Arc	Arc
Alco (4 cyl)	A	Arc	Arc	Arc	Arc	Arc	Arc
Auburn (4 cyl)	A	Arc	Arc	Arc	Arc	Arc	Arc
Auburn (6 cyl)	A	Arc	Arc	Arc	Arc	Arc	Arc
Auburn (8 cyl)	A	Arc	Arc	Arc	Arc	Arc	Arc
Autocar (4 cyl)	A	Arc	Arc	Arc	Arc	Arc	Arc
Autocar (6 cyl)	A	Arc	Arc	Arc	Arc	Arc	Arc
Autocar (8 cyl)	A	Arc	Arc	Arc	Arc	Arc	Arc
Autocar (10 cyl)	A	Arc	Arc	Arc	Arc	Arc	Arc
Autocar (12 cyl)	A	Arc	Arc	Arc	Arc	Arc	Arc
Autocar (14 cyl)	A	Arc	Arc	Arc	Arc	Arc	Arc
Autocar (16 cyl)	A	Arc	Arc	Arc	Arc	Arc	Arc
Autocar (18 cyl)	A	Arc	Arc	Arc	Arc	Arc	Arc
Autocar (20 cyl)	A	Arc	Arc	Arc	Arc	Arc	Arc
Autocar (22 cyl)	A	Arc	Arc	Arc	Arc	Arc	Arc
Autocar (24 cyl)	A	Arc	Arc	Arc	Arc	Arc	Arc
Autocar (26 cyl)	A	Arc	Arc	Arc	Arc	Arc	Arc
Autocar (28 cyl)	A	Arc	Arc	Arc	Arc	Arc	Arc
Autocar (30 cyl)	A	Arc	Arc	Arc	Arc	Arc	Arc
Autocar (32 cyl)	A	Arc	Arc	Arc	Arc	Arc	Arc
Autocar (34 cyl)	A	Arc	Arc	Arc	Arc	Arc	Arc
Autocar (36 cyl)	A	Arc	Arc	Arc	Arc	Arc	Arc
Autocar (38 cyl)	A	Arc	Arc	Arc	Arc	Arc	Arc
Autocar (40 cyl)	A	Arc	Arc	Arc	Arc	Arc	Arc
Autocar (42 cyl)	A	Arc	Arc	Arc	Arc	Arc	Arc
Autocar (44 cyl)	A	Arc	Arc	Arc	Arc	Arc	Arc
Autocar (46 cyl)	A	Arc	Arc	Arc	Arc	Arc	Arc
Autocar (48 cyl)	A	Arc	Arc	Arc	Arc	Arc	Arc
Autocar (50 cyl)	A	Arc	Arc	Arc	Arc	Arc	Arc
Autocar (52 cyl)	A	Arc	Arc	Arc	Arc	Arc	Arc
Autocar (54 cyl)	A	Arc	Arc	Arc	Arc	Arc	Arc
Autocar (56 cyl)	A	Arc	Arc	Arc	Arc	Arc	Arc
Autocar (58 cyl)	A	Arc	Arc	Arc	Arc	Arc	Arc
Autocar (60 cyl)	A	Arc	Arc	Arc	Arc	Arc	Arc
Autocar (62 cyl)	A	Arc	Arc	Arc	Arc	Arc	Arc
Autocar (64 cyl)	A	Arc	Arc	Arc	Arc	Arc	Arc
Autocar (66 cyl)	A	Arc	Arc	Arc	Arc	Arc	Arc
Autocar (68 cyl)	A	Arc	Arc	Arc	Arc	Arc	Arc
Autocar (70 cyl)	A	Arc	Arc	Arc	Arc	Arc	Arc
Autocar (72 cyl)	A	Arc	Arc	Arc	Arc	Arc	Arc
Autocar (74 cyl)	A	Arc	Arc	Arc	Arc	Arc	Arc
Autocar (76 cyl)	A	Arc	Arc	Arc	Arc	Arc	Arc
Autocar (78 cyl)	A	Arc	Arc	Arc	Arc	Arc	Arc
Autocar (80 cyl)	A	Arc	Arc	Arc	Arc	Arc	Arc
Autocar (82 cyl)	A	Arc	Arc	Arc	Arc	Arc	Arc
Autocar (84 cyl)	A	Arc	Arc	Arc	Arc	Arc	Arc
Autocar (86 cyl)	A	Arc	Arc	Arc	Arc	Arc	Arc
Autocar (88 cyl)	A	Arc	Arc	Arc	Arc	Arc	Arc
Autocar (90 cyl)	A	Arc	Arc	Arc	Arc	Arc	Arc
Autocar (92 cyl)	A	Arc	Arc	Arc	Arc	Arc	Arc
Autocar (94 cyl)	A	Arc	Arc	Arc	Arc	Arc	Arc
Autocar (96 cyl)	A	Arc	Arc	Arc	Arc	Arc	Arc
Autocar (98 cyl)	A	Arc	Arc	Arc	Arc	Arc	Arc
Autocar (100 cyl)	A	Arc	Arc	Arc	Arc	Arc	Arc



Carhartt's Overalls

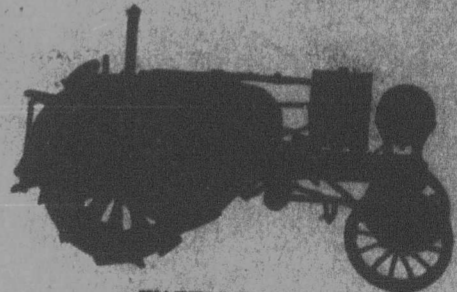
Any man who wants to know why he ought to wear my Carhartt Overalls will find most convincing reasons in the garments themselves. Consider these advantages for example:

- 1 Seams double stitched.
- 2 Every button riveted.
- 3 Points were hardest strain comes doubly reinforced.
- 4 Angular rule pocket.
- 5 Pockets roomy and convenient.
- 6 Give-and-take suspenders.
- 7 Tough, durable denim cloth that wears like leather, and ignores washing and rubbing.

You can be sure of getting my overalls by looking for the Carhartt button.

Hamilton Carhartt, President
Hamilton Carhartt Cotton Mills Limited, Toronto, Montreal, Winnipeg, Vancouver.

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partment.

but useful information can

does not know the ordinary or more correctly speaking, beetle. It comes thumping into the room during the evening the lamps are lighted and the windows are open. Any who are well acquainted with the insect are not aware that it is the same as the white grub more advanced stage. These or "June bugs" have a life span covers a period of about 100 days. First we have the eggs, then the small white grubs, which go down into the soil where they may remain for a number of years. During their second



Characteristic Work of the Cut Worm.

they come near the surface many plants, the straw of the favorites. The grub goes to a pupal or resting stage and emerges a full-fledged beetle. The grub or June bug cannot be combatted with poison, but by cultivating the land properly at the right time that this pest is

we have the cabbage worm most destructive in the garden. It does its bad work all the time so we can poison it when the heads of cabbage in the garden. There will be dozens of species of insects and a study of them will reveal many of the mysteries of



Grub at Work on Plant Roots.

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